SYTINSKAYA, N.N.

Path of the Tunguska meteorite. Meteoritika no.13:86-91 '55.
(Meteorites) (MLRA 9:2)

SYTINSKAYA, N.N., doktor fiziko-matematicheskikh nauk, professor.

Earth's shadow. Nauka i zhizn' 22 no.1:30-32;45 Ja'55.
(Earth) (Moon) (MLRA 8:2)

SYTINSKAYA, N.N.

Conference on the nature of the moon's surface. Astron.tsir.no.157: 24-25 F'55. (MIRA 8:10)

(Moon--Surface)

SYTINSKAYA, N.N.

Preliminary results of integral photometry of the solar corona of June 30, 1954. Astron.tsir. no.161:8-9 Jl'55. (MLRA 8:12)

1. Gosudarstvennyy Yestestvenno-Nauchnyy Institut imeni P.F.Lesgafta
(Photometry, Astronomical) (Sun--Corona)

SYTINSKAYA, N.N.; SHARONOV, V.V., otvetstvennyy redaktor; IMSHENETSKIY, Yu.K., redaktor izdatel'stva; ZENDEL', M.Ye., tekhnicheskiy redaktor

[Instructions for observations of the moon and lunar eclipses; with a supplement of special instructions for the observation of lunar eclipses, formulated by the Committee on Planetary Physics of the Astronomical Council of the Academy of Sciences of the U.S.S.R.] Instruktsiia dlia nabliudenii Luny i lunnykh zatmenii; s prilozheniem spetsial'nykh instruktsii po nabliudeniiu lunnykh zatmenii, razrabotannykh Komissiei po fizike planet Astronomicheskogo soveta AN SSSR. Sost. N.N.Sytinskaia. Moskva, Izd-vo Akademii nauk SSSR, 1956. 29 p. (MLRA 9:7)

1. Vsesoyuznoye astronomo-geodezicheskoye obshchestvo.
(Moon--Observations)

SYTINSKAYA, Nadezhda Nikolayevna; RAKHLIN, I.Ye., redaktor; MURASHOVA, N.Ya., tekhnicheskiy redaktor

[The opposition of Mars at perihelion] Velikoe protivostoianie Marsa. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 49 p. (MLRA 9:11)
(Mars (Planet)--Opposition, 1956)

SYTINSKAYA, Nadezhda Nikolayevna, professor; DVUKHSHERSTOV, G.I., redaktor; ZORINA, Ya.A., redaktor; GARNEK, V.P., tekhnicheskiy redaktor

[Modern science on the origin of the solar system] Sovremennaia nauka o proiskhozhenii solnechnoi sistemy. Moskva, Izd-vo Akademii pedagog. nauk RSFSR, 1956. 93 p. (MLRA 9:8)
(Solar system)

SYTINSKAYA, Nadezhda Nikolayevna; SAMSONENKO, L.V., redaktor; MURASHOVA, N.Ya., tekhnicheskiy redaktor.

[Moon and its observation] Luna i ee nabliudenie. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1956. 253 p. (MLRA 9:6)
(Moon)

SYTINSKAYA, N.N., professor.

Present-day studies of the atmosphere and surface of Mars. Priroda 45 no.6:33-41 Je '56. (MLRA 9:8)
(Mars (Planet))

SYTINSKAYA, N.N.

Relation of polarization and albedo for lunar surface features. Astron.tsirk. no.168:18 '56. (MLRA 9:8)

1. Gosudarstvennyy estestvenno-nauchnyy institut imeni P.F. Lesgafta.

(Moon--Surface)

SYTINSKAYA, N.N.

Absolute surface photometry and colorimetry of the solar corona of June 30, 1954. Astron.tsirk. no.170:5-7 '56. (MLRA 9:10)

1.Gosudarstvennyy Yestestvenno-nauchnyy institut imeni P.F.Lesgafta.
(Sun--Corona)

SYTINSKAYA, N.N

BRONSHTEN, Vitaliy Aleksandrovich; SYTINSKAYA, N.N., prof. red.; SAMSONENKO, L.V., red.; BRUDNO, K.F., tekhn.red.

[Planets and their observation] Planety i ikh nabliudenie. Pod red. N.N.Sytinskoi. Moskva, Gos.izd-vo tekhniko-teoret. lit-ry, 1957. 206 p. (MIRA 11:2)
(Planets)

SYTINSKAYA, N.N.

Explosions of meteorites as causes of modifications of the moon's surface [with summary in French]. Vop. kosm. 5:13-21 '57.
(Moon--Surface) (Meteorites) (MIRA 10:8)

SYTINSKAYA, N.N.

New value of the light constant of the moon [with summary in English]. Astron. zhur. 34 no.6:899-902 N-D '57. (MIRA 11:2)

1. Yestestvenno-nauchnyy institut im. P.F. Lesgafta.
(Moon--Observations)

SYTINSKAYA, N.N.

Nature of yellow turbidities on Mars. Astron. tsir. no.177:4-5 F '57.
(MIRA 10:6)

1. Gosudarstvennyy Yestestvenno-nauchnyy Institut im. P.F. Lesgafta.
(Mars (Planet))

SYTINSKAYA, N.N.

Origin and nature of lunar surface crust based on data of comparative study of brightness-color diagrams. Uch.zap.LGU no.190:74-87 '57
(MLRA 10:7)

(Moon--Surface)

SYTINSKAYA, N.N.

Photographic determination of the absolute brightness and color of the solar corona in 1952. Uch.zap.LGU no.190:89-94 '57. (MLRA 10:7)

(Sun--Corona)

SYTINSKAYA, N. N.

"Distribution of Brightness and Color in the Solar Corona of June 30, 1954"

(Total Eclipse of the Sun, February 25, 1952 and June 30, 1954, Transactions of the Expedition to Observe Solar Eclipses) Moscow, Izd-vo AN SSSR, 1958. 357 p.

SYTINSKAYA, N. N.

"Photographic Evaluation of the Total Brightness and Color of the Solar Corona of 1954 in Yeysk"

(Total Eclipse of the Sun, February 25, 1952 and June 30, 1954, Transactions of the Expedition to Observe Solar Eclipses) Moscow, Izd-vo AN SSSR, 1956. 357 p.

SYTINSKAYA, N. N.

"The Development and the Confirmation of the Hypotheses Concerning the Nature of the Surface Layers of the Moon."
paper read by V. V. SHARONOV

Report presented at the Plenary Meeting of the Committee of Planetary Physics, Council of Astronomers, Khar'kov, 20-22 May 1958.
(Vest. Ak Nauk SSSR, 1958, No. 8, p. 113-114)

Stanyukovich, K.P. SYTINSKAYA, N.N.

MACR I BOOK EXPLOITATION 807/3839
807/58-4-24(31)

Vesesoyuznoye astronomo-geodezicheskoye obshchestvo

Byulleten', No. 24/31/, 1959 (Bulletin, No. 24/31/, 1959) Moscow, Izd-vo AN SSSR, 1959. 77 p. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR.

Ed. of Publishing House: K.P. Gurov; Tech. Ed.: G.A. Artem'yeva. Editorial Board: V.V. Kozhevnikov (Resp. Ed.), M.S. Eygenson, I.F. Zolkin, A.A. Isotov, P.P. Parenago, P.I. Popov, V.A. Brumberg (Scientific Secretary).

PURPOSE: This publication is intended for astronomers, geophysicists, geodesists, and theoretical physicists.

COVERAGE: This issue of the Bulletin of the All-Union Astronomical and Geodetic Society contains articles on lunar and solar eclipses, photographic observation of Jupiter and Perseid, scintillescent clouds, a collimating view finder, and the modeling of lunar cirques. The Kuybyshev Astronomical Observatory is described in a separate article. References accompany individual articles.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

Card 3/3

JA/dwm/gmp
7-25-60

19

3(1) PHASE I BOOK EXPLOITATION SOV/3303

Sytinskaya, Nadezhda Nikolayevna

Priroda luny (Physical Environment of The Moon) Moscow, Fizmatgiz, 1959. 175 p. 20,000 copies printed.

Ed.: I. Ye. Rakhlin; Tech. Ed.: Ye. A. Yermakova.

PURPOSE: This booklet is intended for the general reader interested in the natural conditions on and surrounding the Moon.

COVERAGE: The author defines the field of selenology and proceeds to a scientific description of the natural conditions on the Moon. Lunar rotation, revolution, phases, and libration are described. The size, mass, and density of the Moon are discussed as well as lunar topography. Lunar eclipses and the influence of the Earth's atmosphere on the appearance of an eclipse are explained. The elevation of mountains on the Moon is indicated and the history of lunar formations reviewed along with the physical aspects of the lunar surface, its coloration, and luminescence. The Appendix contains a listing of lunar landforms

Card 1/4

Physical Environment (Cont.)

S/269/63/000/002/025/037
A001/A101

AUTHOR: Sytinskaya, N. N.

TITLE: On the photometric study of optical properties of the Martian atmosphere

PERIODICAL: Referativnyy zhurnal, Astronomiya, no. 2, 1963, 62 - 63, abstract 2.51.500 (In collection: "Rezul'taty nablyudeniy Marsa vo vremya velikogo protivostoyaniya 1956 g. v SSSR", M., AN SSSR, 1959, 114 - 122)

TEXT: Optical parameters of the atmosphere of the planet are listed which can be obtained from observations: optical depth τ, its change with wavelength, the role of true absorption in the phenomenon of extinction, indicatrix of scattering. Two types of regions are observed in the Martian atmosphere: transparent (with small τ) and cloudy-nebulous, where τ is considerable, which calls for employing different methods of investigation. The present article treats the problem of regions with transparent atmosphere, for which is should be possible to separate the brightness components created by scattering in the atmosphere and reflection from the surface. It is pointed out that the single-

Card 1/2

On the photometric study of...

valued solution of this problem on the basis of photometric data only is impossible, since the number of unknowns is too great (in addition to parameters of the atmosphere there are also photometric characteristics of the surface). Therefore the practical application of photometry to study of an atmosphere always includes some system of hypotheses on the nature of which depends the reliability of the results obtained. In particular, the scattering indicatrix should be assumed. The author describes the method of interpreting absolute photometric measurements of the Martian disk at the instant of opposition, whose results are expressed in the form of brightness factor or visible albedo. It is assumed that τ is constant either in time or along the radius of the disk, and the law of reflection from the surface is expressed by the factor of smoothness q. The brightness of an atmospheric layer is described by an empirical formula whose numerical parameters are determined on the basis of one of the light scattering theories. Then the problem is reduced to the solution of a system of transcendental equations, whose unknowns are τ, q and albedo of the surface r; each equation corresponds to definite value of angular distance of the region from the center of the disk. The method of solving such a system is described in detail. Reality of the obtained characteristics of the Martian atmosphere and surface is considered. There are 14 references.

I. Lebedeva

[Abstracter's note: Complete translation]

Card 2/2

S/269/63/000/002/028/037
A001/A101

AUTHOR: Sytinskaya, N. N.

TITLE: Some considerations on the state of the atmosphere of Mars

PERIODICAL: Referativnyy zhurnal, Astronomiya, no. 2, 1963, 63 - 64, abstract 2.51.503 (In collection: "Rezul'taty nablyudeniy Marsa vo vremya velikogo protivostoyaniya 1956 g. v SSSR", M., AN SSSR, 1959, 166 - 171)

TEXT: The author studies the problem of yellow-colored fogs widely spread on Mars during the opposition of 1956. It is noted that the regions affected by fogs single out against the background of seas, but blend with the background of continents. Based on this, and taking into consideration characteristics obtained for transparent regions of the atmosphere, the author calculates the dependence of the contrast of seas on the optical depth of fog layers. Applied to Mars observations this leads to a conclusion that the transparency coefficient of the Martian atmosphere decreased 3 times during days with high turbidity, and optical depth increased by one unity. Discussing the nature of

Card 1/2

Some considerations on the state of...

yellow turbidity the author shares the opinion that aerosol was formed by mineral particles suspended in the atmosphere from the surface. This material can not be sand, since it was kept suspended for a long time. It is natural to suppose that fine fractions of particles of the slit and pelite nature produced the fog. The fog color corresponds to ocherous varieties of limonite that confirms the hypothesis according to which Martian continents are covered with limonite dust. There are 17 references.

I. Lebedeva

[Abstracter's note: Complete translation]

Card 2/2

SYTINSKAYA, N.N.

Probable dimensions of the unevenness of microrelief on the moon's surface. Izv.Kom.po fiz.plan. no.1:81-84 '59. (MIRA 13:7)

(Moon--Surface)

SYTINSKAYA, N.N. (Leningrad)

Photometry of noctilucent clouds by an amateur astronomer.
Biul.VAGO no.24:28-36 '59. (MIRA 13:4)
(Clouds) (Photometry, Astronomical)

3(1)
AUTHOR: Sytinskaya, N.N. SOV/33-36-2-14/27

TITLE: New Data on the Meteor - Slag Theory of the Formation of the Outer Layer of the Lunar Surface

PERIODICAL: Astronomicheskiy zhurnal,Vol 36,Nr 2,pp 315-321 (USSR) 1959

ABSTRACT: The author concludes from photometric, colorimetric and polarimetric investigations of the moon that the visible part of its surface consists of strongly porous striated material of a structure like volcanic slag. This material is formed from the rocks of the lunar crust by the impacts of meteoric bodies. This so-called meteor-slag theory will be confirmed by the new facts presented by the author : Recent determinations of the density of the lunar atmosphere give extremely small values, so that even micrometeorites will meet the lunar surface with cosmic velocities. And rocket measurings give a frequency of one impact per cm^2 per sec. Finally, some details on the probable structure of the surface material are discussed. The author mentions F.F. Petrushevskiy, N.S. Orlova, V.P. Dzhapiashvili, K.P. Stanyukovich, V.V. Fedynskiy and I.A.Yudin.

New Data on the Meteor - Slag Theory of the Formation of the Outer Layer of the Lunar Surface SOV/33-36-2-14/27

There are 1 table, and 18 references, 12 of which are Soviet, 3 American, 1 English, 1 Irish, and 1 French.

ASSOCIATION: Glavnaya astronomicheskaya observatoriya Akademii nauk SSSR (Main Astronomical Observatory of the AS USSR)

SUBMITTED: June 18, 1958

Card 2/2

SYTINSKAYA, N. N.

"The Meteorite-Slag Theory Of The Lunar Surface".

paper presented at IAU Symposium on the Moon, Leningrad, USSR, 6-8 Dec 60.

The visible outer layer of the lunar surface is the result of the alteration of the initial lunar rocks by external factors, the most active being meteorite and micrometeorite impacts. The impact of a meteorite of any size is accompanied by an explosion during which some of the material of the lunar surface evaporates and then subsides, forming exceedingly porous material similar to volcanic slag. The low thermal conductivity in vacuum and the scattering diagram of volcanic slag is in good accordance with observations made for the lunar surface. The comparison of reflection laws in the optical and radio diapasons shows that the unevenness is more probably of the order of millimeters. The dark coloring of the surface is explained by the presence of dark iron oxides, which were formed by the decomposition of silicates containing iron.

Leningrad Univ

SYTINSKAYA, N. N.

PHASE I BOOK EXPLOITATION SOV/4313

Barabashov, N.P., V.A. Bronshten, M.S. Zel'tser, E.L. Krymanovskiy, A.I. Markov, K.P. Stanyukovich, F.Yu. Siegel, A.V. Khabakov, Sh.T. Khabibullin, V.V. Sharonov, and A.K. Takovlin.

Luna (The Moon) Moscow, Fizmatgiz, 1960. 384 p. 4,500 copies printed.

Ed.: (Title page): A.I. Markov, Doctor of Physics and Mathematics; Ed.: G.A. Manova; Tech. Ed.: M.Ya. Nurenberg.

PURPOSE: This book is intended for astronomers, astrophysicists, and other scientific and technical personnel interested in lunar research.

COVERAGE: The book, written by 11 Soviet authorities, summarizes and evaluates research done to date in selenology. The motion, rotation, and figure of the Moon, physical properties of the lunar surface, the question of the existence of lunar atmosphere, mapping of the Moon, radar investigations, and the effect of external cosmic forces on the Moon are discussed. An index of Russian and Latin designations of lunar features is included. The text is illustrated with 110 figures and 32 tables. There are 74 references: 34 Soviet, 32 English, 6 German, and 2 French.

Card 1/6

39325
S/035/62/000/007/049/083
A001/A101

3.2500

AUTHOR: Sytinskaya, N. N.

TITLE: Photometric and colorimetric comparison of some porous and compact rocks of volcanic origin with the lunar surface

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1962, 73, abstract 7A521 ("Izv. Komis. po fiz. planet", 1960, no. 2, 59 - 64)

TEXT: Various volcanic rocks (pumice, slag, volcanic tuffs) were compared with formations of the lunar surface as to the color and lightness. The following conclusions have been drawn: 1) Volcanic slag turned out to be the darkest rock whose average value of lightness r=0.060. 2) The average result for slag is similar to that obtained earlier (RZhAstr, 1956, no. 7, 4217) for the fused crust of meteorites (r=0.052;yellowness index D=+0.11). 3) The average values of parameters for all rocks of basic composition (diabase, basalt, gabbro, etc.) were equal to r=0.141; D=-0.04. 4) For ultra-basic rocks it was obtained on the average: r=0.104, D=-0.006. 5) The lightness comparison warrants the conclusion that lunar continents are covered with ultra-basic rocks, while the seas by volcanic slag. However, there is no sufficient similarity in color. 6) Pumice shows no similarity with the Moon in albedo. 7) Volcanic tuffs contain specimens of very diverse color-

Card 1/2

Photometric and colorimetric comparison of...

from black to light-grey and from bluish to bright-red. 8) It is desirable to extend the investigation to uncemented pyroclastic rocks (volcanic ashes, sand, lapilli, bombs). There are 8 references.

I. R.

[Abstracter's note: Complete translation]

SYTINSKAYA, N., prof.

Lunar photometry. IUn.tekh. 4 no.2:36-40 F '60.
(MIRA 13:6)

(Moon) (Photometry)

83434
Z/003/60/000/008/001/003
A203/A026

3,2300

AUTHOR: Sytinská, N.

TITLE: What Awaits Man on the Moon

PERIODICAL: Křídla vlasti, 1960, No. 8, pp. 6-7

TEXT: In connection with the successful launching of a Soviet rocket to the moon on March 14, 1959, the author presents a review of the current views concerning the conditions on the moon. A previous hypothesis that there is a rarefied atmosphere of gases on the moon has not been proven. However, in the night from October 2 to 3, 1958, Soviet Astronomer N.A. Kozyrov observed through a powerful telescope of the Crimean Observatory a short flash in the Alphonso Crater, apparently a cloud of gas which became luminiscent following a volcanic explosion. This is an indication that gases occasionally occur on the moon. The surface of the moon has also been well explored. With the aid of powerful radars it has been established that the moon surface is covered by pits and blisters, whose size ranges from a few millimeters to several centimeters. This is attributed to the effects of meteorite impacts. Soviet Scientists K.P. Stanyukovich and V.V. Fedynskiy proved by calculations that the energy released

Card 1/2

83434

Z/003/60/000/008/001/003
A203/A026

What Awaits Man on the Moon

during a meteorite impact on the moon is great enough not only to vaporize the meteorite itself, but also part of the moon rock. Meteorites and lack of atmosphere will, therefore, constitute the greatest obstacles to man if and when he lands on the moon. There are 2 photographs.

Card 2/2

SYTINSKAYA, Nadezhda Nikolayevna; KULIKOV, G.S., red.; YERMAKOVA, Ye.A., tekhn. red.

[Planet Mars] Planeta Mars. Moskva, Gos. izd-vo fiziko-matem. lit-ry, 1962. 61 p. (Populiarnye lektsii po astronomii, no.12) (MIRA 15:4)

(Mars (Planet))

ASTAPOVICH,I.S.; BAKULIN,P.I.; BAKHAREV,A.M.; BRONSHTEN,V.A.; BUGOSLAVSKAYA, N.Ya.[deceased]; VASIL'YEV,O.B.; GRISHIN,N.I.; DAGAYEV,M.M.; DUBROVSKIY,K.K.[deceased]; ZAKHAROV,G.P.; ZOTKIN,I.T.; KRAMER,Ye.N.; KRILOV,Ye.L.; KULIKOVSKIY,P.G.; KUNITSKIY,R.V.; KUROCHKIN,N.Ye.; ORLOV,S.V.[deceased]; POPOV,P.I.; PUSHKOV, N.V.; RYBAKOV, A.I.; RYABOV,Yu.A.; SYTINSKAYA, N.N.; TSESEVICH, V.P.; SHCHIGOLEV,B.M.; VORONTSOV-VEL'YAMINOV,B.A.,red.; POPOMAREVA,G.A., red.; KRYUCHKOVA, V.N., tekhn. red.

[Astronomical calender; permanent part] Astronomicheskii kalendar'; postoiannaia chast'. Izd.5., polnost'iu perer. Otv. red. P.I.Bakulin. Red.kol.V.A.Bronshten i dr. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1962. 771 p. (MIRA 15:4)

(Astronomy--Yearbooks)

SYTINSKAYA, N. N.

"Lunar microrelief."

Report to be submitted for the Symposium on Geological Problems in Lunar Research, N.Y. Acad. of Sciences, New York, 16-19 May 1964.

SYTINSKAYA, N.N.

Some characteristics of the polar caps of Mars and their explanation by photographic irradiation. Astron.zhur. 40 no.4:710-713 Jl-Ag '63. (MIRA 16:8)

(Mars (Planet))

SYTINSKAYA, N.N.

Albedo of separate features of the moon's surface. Astron. zhur. 40 no.6:1083-1084 N-D '63. (MIRA 16:12)

L 36313-65 EWT(1)/EWG(v)/EEC(t) Pe-5/Pae-2 GW
ACCESSION NR: AP5006008 S/0033/65/042/001/0129/0135

AUTHOR: Sytinskaya, N. N.

TITLE: Experience in the colorimetric comparison of asteroids and terrestrial rocks

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 1, 1965, 129-135

TOPIC TAGS: colorimetry, astrophysics, asteroid, terrestrial rock, sun, color index, meteorite, moon, yellowness index

ABSTRACT: A catalog has been compiled of the yellowness index D (the difference between the color index of an asteroid and the sun) for 69 asteroids on the basis of data of various authors. The values obtained fall in the range -0.08 — +0.40, with a mean of +0.178. The distribution curve of the asteroids according to D is approximately symmetrical and has a sharp maximum at D = 0.17. Similar curves and the mean D values are determined for terrestrial materials, the previously published D values being converted to the B - V system. It was found that there is no similarity between the curve for the asteroids and the curves for limestones, sandstones, granites, metamorphic rocks or for volcanic tuffs and slags because these

Card 1/3

L 36313-65
ACCESSION NR: AP5006008

rocks have a considerable color dispersion, and accordingly the curves extend far in the direction of large D values. Likewise, there is no adequate similarity to basic and ultrabasic rocks. These rocks are characterized by a small color dispersion, but in comparison with the curve for the asteroids, the corresponding curves are displaced greatly in the direction of a neutral color. The curves for pumice, meteorites, the molten crust of meteorites, and details of the lunar surface show a similarity in curve width (small color dispersion) and at the same time differ in the position of the maximum by not more than D = 0.1. Interpretation of the results requires at least approximate data on the brightness of the surface of asteroids, but it is impossible to determine the necessary asteroid albedo values except in four cases (K. Stumpff, Astron. Nachr., 276, 118, 1948). The mean spherical albedo in these four cases is 0.12, suggesting that the surface of asteroids in general is dark; their surfaces can therefore hardly consist of pumice or meteorites. The values of the phase coefficient for almost all the asteroids fall in the range 0.02-0.05 mag/degree, which is close to the values for the Moon (0.023) and Mercury (0.037). This suggests in turn that the photometric relief of all celestial bodies without an atmosphere is similar. On the basis of optical characteristics, the surface of the asteroids is closer to

Card 2/3

L 36313-65
ACCESSION NR: AP5006008

lunar surface than any other object compared. It is postulated that the dark slaglike material covering the lunar surface is disseminated widely over all the small bodies of the solar system, where it is formed, as on the Moon, by the impact of meteor bodies of different mass. Orig. art. has: 5 formulas, 3 figures, and 3 tables. [08]

ASSOCIATION: none

SUBMITTED: 19May64 ENCL: 00 SUB CODE: AA, ES

NO REF SOV: 008 OTHER: 011 ATD PRESS: 3219

Card 3/3

L 16066-66 EWT(1) GM/GS

ACC NR: AT5024607 SOURCE CODE: UR/0000/65/000/000/0079/0081

35

AUTHOR: Sytinskaya, N. N.

B+1

ORG: Astronomic Observatory of the Leningrad State University (Astronomicheskaya observatoriya Leningradskogo gosudarstvennogo universiteta)

TITLE: Aerosol component of the Martian atmosphere 12,55

SOURCE: AN UkrSSR. Voprosy astrofiziki' issledovaniye atmosfer Venery i Marsa (Problems in astrophysics; investigation of the atmospheres of Venus and Mars). Kiev, Izd-vo Naukova dumka, 1965, 79-81

TOPIC TAGS: mars planet, planet atmosphere, aerosol, photometry

ABSTRACT: The photometric study of the Martian atmosphere was divided into 2 stages: (1) determination of the optical thickness (τ) of the atmospheric layer from an analysis of the distribution of brightnesses along the planet disc, and (2) determination from τ of other parameters of the atmosphere (mass,

Card 1/2

2

L 16066-66

ACC NR: AT5024607

density, pressure on the planet surface, etc.). The results depend on the model selected as the general scheme of the atmosphere. The scheme of a purely gas atmosphere with a dispersion according to Raley's law was convenient and most often used, but did not take into consideration the aerosol component of the atmosphere. An attempt was made to determine some parameters from data on the 1939 Mars opposition by using the King formula ($\tau = A/\lambda^4 + D$) during calculations with an extended indicatrix of scattering. The obtained values of atmospheric pressure (60 mbar) were much smaller than those (85 mbar) obtained by using the scheme of the Raley atmosphere. But even these values seemed to be higher than actual because the King formula was derived with the assumption that the atmospheric plankton consisted of large particles on which a neutral scattering (D) of light occured. Because there is no reliable method yet for the separation of gas and aerosol components, the solution probably can be found in reversing the problem: by studying the content of suspended particles photometrically and using the values of pressure determined by some other methods. The calculation showed that about half of the τ values were contributed by aerosol if the data on the 1939 value of τ were used and the assumption that the pressure near the surface was 25 mbar. Orig. art. has: 2 formulas.

SUB CODE: 03 SUBM DATE: 05Jun65

Card 2/2

ACC NR: AR6020774 SOURCE CODE: UR/0269/66/000/003/0073/0073

AUTHOR: Sytinskaya, N. N.

TITLE: Search for variable brightness contrasts on the lunar surface as a scientific working program for small observatories

SOURCE: Ref. zh. Astronomiya, Abs. 3.51.608

REF SOURCE: Byul. Vses. astron.-geod. o-va, no. 36, 1965, 38-43

TOPIC TAGS: lunar surface, lunar topography, lunar reflectivity

ABSTRACT: The variations in brightness contrast, which were detected on the lunar surface, depending on the phase, may have an important meaning in studying the structure of the surface layer of the Moon, because these variations can be caused only by the different laws of light reflections from the components of the small areas causing this contrast. The constant character of the brightness contrasts on the Moon was ascertained only for the large objects which were sufficiently studied by photometric methods. These data are not available for the large amount of smaller objects. The calculations made by the author for the two combinations of earth soils (basalt and volcanic slag, volcanic ashes and lapilli), showed that the changes of contrasts are sufficiently large (up to 0.6-0.7) so as to be easily detected by the eye. In searching on the lunar surface for small objects having contrast variations that can

UDC: 523.34

Card 1/2

SYTINSKAYA, O. N. Cand Biol Sci -- (diss) "Oxidizing phosphorylation in the liver in cases of pantothen and biotin insufficiency." Len, 1956. 9 pp 21 cm. (Acad Med Sci USSR. Inst of Experimental Medicine), 100 copies (KL, 14-57, 86)

SYTINSKAYA, O.N.

Modified method for determining sulfanilamides adapted to studying the coenzyme A content and the acetylation capacity of tissues. Vop.med.khim. 2 no.3:214-221 My-Je '56. (MLRA 9:10)

1. Otdel biokhimii Instituta eksperimimental'noy meditsiny AMN SSSR, Leningrad.

(SULFANILAMIDE, determination,
modified technic with determ. of coenzyme A & of acetylation capacity of tissues (Rus))

(COENZYMES,
A, determ. in detection of sulfanilamides (Rus))

Sytinskaya, O.

Processes of oxidative phosphorylation in extracts of livers of animals with biotin deficiency. O. N. Sytinskaya. Doklady Akad. Nauk S.S.S.R. 110. 253-5(1956). — A de- ... oxidative phosphorylation was ... to such a grea. degree. The content of ... activating ability of the liver are within normal limits in ... these ... [illegible] ... at some other enzyme ... G. M. Kon ...

Inst. Experimental Med., AMS USSR

GOLOVIN, B.P.; SYTINSKAYA, O.N.

Steroid hormones and the activity of renal hexokinase. Vop.med.khim. 5 no.5:348-352 S-O '59. (MIRA 13:2)

1. Institute of Experimental Medicine of the U.S.S.R. Academy of Medical Sciences, Leningrad.
(KINASES metab.)
(KIDNEYS metab.)
(STEROIDS pharmacol.)

SYTINSK.YA, O. N., DOKUSOVA, O. K. (USSR)

"Hexlkinase Activity and Oxidative Phosphorylation in the Liver of Biotin-Deficient Chicks (Read by title)."

Report presented at the 5th International Biochemistry Congress, Moscow, 10-16 August 1961

GOLOVIN, B.P.; SYTINSKAYA, O.N.

Influence of hormones on the hexokinase activity of subcellular renal structures in the rabbit. Vop. med. khim. 7 no.5:492-494 S-O '61. (MIRA 14:10)

1. The Department of Biochemistry of the Institute of Experimental Medicine of the Academy of Medical Sciences of the U.S.S.R.
(KIDNEYS) (HEXOKINASE) (HORMONES)

OCHAPOVSKIY, B.L.; RASPOPOV, O.M.; SYTINSKIY, A.D.

Vertical gradient of the force of gravity. Uch.zap.Len.un. no.210: 114-133 '56. (MLRA 9:8)

(Gravity)

SYTINSKIY, A.D., mladshiy nauchnyy sotrudnik

Seismic observations at the Mirnyy Observatory. Inform.biul. Sov.antark.eksp. no.1:79-80 '58. (MIRA 12:8)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.
(Antarctic regions--Seismometry)

FILE I BOOK EXPLOITATION SOV/4339

Sovetskaya antarkticheskaya ekspeditsiya, 1955-

Pervaya kontinental'naya ekspeditsiya 1955-1957 gg.; nauchnyye rezul'taty (First Continental Expedition, 1955-1957; Scientific Results) Leningrad, Izd-vo "Morskoy transport," 1959. 161 p. 2,000 copies printed. (Series: Its: Materialy, tom 2)

Sponsoring Agency: Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

Ed.: M.M. Somov, Doctor of Geographical Sciences; Tech. Ed.: L.P. Drokhtsina.

PURPOSE: This book is intended for polar specialists, geographers, geologists, meteorologists, and geophysicists.

COVERAGE: This book is Volume 2 of a multivolume work containing scientific data collected by the First Soviet Continental Expedition to the Antarctic (1955-57), sent out under the auspices of the Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut (Arctic and Antarctic Scientific Research Institute) as part of the IGY program. The purpose of the expedition was to survey an area between 74 to 111°E longitude and 59 to 70°S latitude (an area of about 1 million square kilometers), to develop methods and techniques for field studies applicable to local conditions, and to initiate a systematic study of the natural phenomena of the region. Ground and aerial observations were conducted in the more interesting areas around and between Mirnyy and Pionerskaya, in the three oases of Oazisnaya, Bunger, and Vostok, on the Shackleton Ice Shelf, Drygalski Island, and a number of nunataks (Anuchina, Gaussberg, etc.). Geological, geographic, and geophysical observations were made at the Mirnyy Observatory and at the Pionerskaya and Oazis research stations. No personalities are mentioned. There are no references.

AVAILABLE: Library of Congress (G860.S58)

SYTINSKIY, A.D.

SYTINSKIY, A.D.

From the life of penguins. Inform. biul. Sov. antark. eksp. no.4:73-75 '59. (MIRA 12:11)

(Penguins)

SYTINSKIY, A.D., mladshiy nauchnyy sotrudnik

Map of the distribution of earthquake epicenters based on observations made at the Mirnyy Observatory. Inform. biul. Sov. antark. eksp. no.7:31-33 '59. (MIRA 13:3)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.
(Antarctic regions--Earthquakes--Maps)

ACCESSION NR: AT4041518 S/2732/59/002/000/0153/0156

AUTHOR: Sy*tinskiy, A. D.

TITLE: Seismic observations at Mirny*y

SOURCE: Sovetskaya antarkticheskaya ekspeditsiya, 1955-1958. Pervaya kontinental'naya ekspeditsiya, 1955-1957 gg.; nauchny*ye rezul'taty* (First continental expedition; scientific results). Trudy* ekspeditsii, v. 2. Leningrad, Izd-vo "Morskoy transport," 1959, 153-156

TOPIC TAGS: seismicity, seismic activity, seismology, seismic station, microseism, geophysics

ABSTRACT: The seismic station at Mirny*y in Antarctica is located on a rock outcrop at an elevation of 17 m above sea level, remote from sources of man-induced interference; the instruments are in a depression in a granitic intrusion and protected from the influence of strong winds. Serious interference is created, however, by microseisms of the first kind. These microseisms occur due to the proximity of the site to the sea shore and the passage of frequent low-pressure areas. About 30% of all seismograms have a considerable microseismic background, and in certain cases the microseismic background is so severe that

Card 1/3

ENCLOSURE: 01

ACCESSION NR: AT4041518

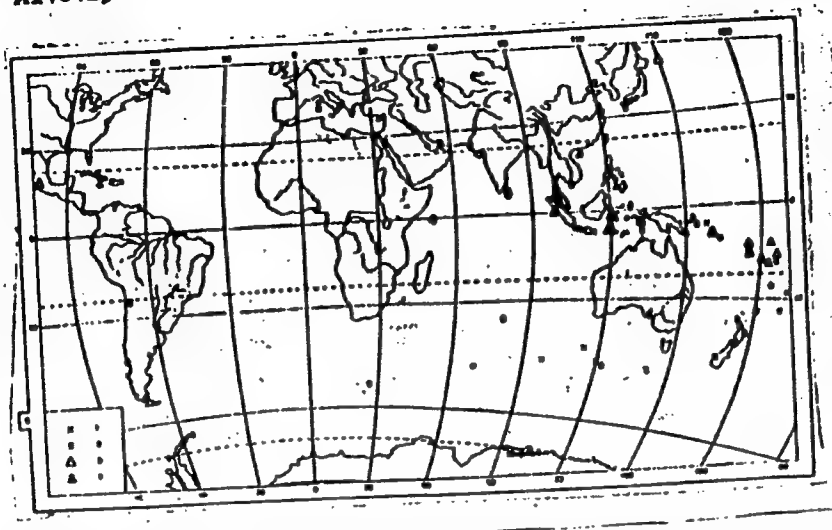


Fig. 1. Map of the distribution of earthquake epicenters on the basis of observations at the seismic station at Mirny*y (from 23 June 1956 to 1 February 1957). Symbols: 1 - up to 7 units ($M < 5.3$); 2 - 7 units and above ($M \geq 5.3$); 3 - h = 60-300 km; 4 - h > 300 km.

Card 3/3

28394
S/169/61/000/007/012/104
A006/A101

3,5000

AUTHOR: Sytinskiy, A.D.

TITLE: Microseisms at Mirnyy and their connection with hydrometeorological conditions

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 7, 1961, 11, abstract 7A114 (V sb. "Seysm. issled. no. 4", Moscow, AN SSSR, 1960, 116 - 132, English summary)

TEXT: From June 1956 regular seismic observation with the aid of Kirnos devices were started at Mirnyy. These devices possess an almost constant magnification within a 0.2 - 9 sec range of seismic wave periods; this is quite convenient for recording microseisms. An analysis of microseismic records consisted in the measuring of amplitudes and periods for 4 periods during a day. In the case of heavy microseismic storms the directions on the microseismic sources were determined from Raleigh waves. Microseisms with 2 to 10 sec periods are observed at Mirnyy; during the summer shorter periods prevail. The independence of intensity on seasonal changes of the ice cover around the Antarctic is a characteristic feature of long-period (winter) microseisms. They are most intensive

Card 1/2

S/169/62/000/005/005/093
D228/D307

AUTHOR: Sytinskiy, A. D.

TITLE: The relation of geotectonics to solar activity

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 14, abstract 5A100 (Inform. byul. Sov. antarkt. ekspeditsii, no. 28, 1961, 5-10)

TEXT: The relation of the yearly distribution of the amount of seismic energy, evolved in strong earthquakes (M>7), to the course of the solar activity indices is considered, and it is established that the greatest quantity of energy occurs in the years of the maxima and the minima (with a one-year displacement) of the 11-year solar activity cycle. The dates of catastrophic planetary earthquakes also fall in the same years. Proceeding from the fact that the prevailing seismic energy value is distinguished in these strongest earthquakes (M>8), a direct relation between these phenomena is proposed in accordance with the scheme: solar activity -- change in the angular rate of the earth's rotation -- change in

Card 1/2

The relation of ...

the earth's figure -- intensification of solar activity. The character of the solar activity's influence on the angular rate of the earth's rotation is reckoned to be as yet unestablished. It is possible that this process is related to the interaction of the earth's magnetic fields with wave and corpuscular solar-radiation flows. The total quantity of energy, evolved in connexion with the seasonal change in the rate of the earth's rotation, amounts to 1.27×10^{27} ergs for the crust; it approximately corresponds to the total annual magnitude of the liberated energy of shallow earthquakes. The annual trend of the energy of earthquakes with a normal focal depth anticipates that of the seismic energy of intermediate and deep earthquakes by one month. In the author's opinion this circumstance, and also the excess of normal earthquake energies over those of intermediate and deep ones, is due to the fact that the genesis of earthquakes is connected with sources lying beyond the earth. 16 references. [Abstracter's note: Complete translation.]

Card 2/2

S/169/62/000/006/065/093
D228/D304

AUTHOR: Sytinskiy, A. D.

TITLE: Question of using microseisms in weather forecasting at Mirnyy

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 6, 1962, 40, abstract 6B266 (Inform. byul. Sov. antarkt. ekspeditsii, no. 29, 1961, 33-38)

TEXT: Microseisms are understood to be surface Rayleigh- and Love-type waves, arising in the crust as a result of sea and ocean gales and spreading at a velocity of ~3 km/sec. Microseismic vibrations exist continuously; their amplitudes A and periods T vary in time. For Mirnyy microseisms with T≈5 sec and 2A < 1 μ represent the normal background to scattered sources. When 2A > 1 μ, it is possible to speak of a seismic storm or so-called gale microseisms. Microseismic storms appear whenever cyclones pass, or the wind speed increases, in the ocean at a sufficiently close distance to the coast. —The larger the amplitude of microseisms, the closer, the deeper

Card 1/2

S/169/62/000/006/065/093
D228/D304

Question of using ...

and the more intense the cyclones. Short-period microseisms (T ≈ 2 - 5 sec) reflect the state of the weather and the swell in a narrow coastal region and are generated only within mainland shallows. Long-period microseisms (T≈5 - 10 sec), being generated beyond mainland shallows or at their edges, depend on the state of the weather over extensive ocean regions. A number of synoptic charts, illustrating the location of cyclones in comparison with the data about microseisms according to observations at Mirnyy, are given. It is noted that the cited regularities doe not completely settle the question of the relation of microseisms to the weather. [Abstracter's note: Complete translation.]

Card 2/2

S/203/63/003/001/017/022
A061/A126

AUTHOR: Sytinskiy, A. D.

TITLE: Contemporary tectonic movements as one of the manifestations of the solar activity

PERIODICAL: Geomagnetizm i aeronomiya, v. 3, no. 1, 1963, 148 - 156

TEXT: The attempt is made to explain some geotectonic movements by both internal and external causes. The study is restricted to the causes of the variations of the angular velocity of the Earth. The relationship between solar activity and angular velocity is indicated: the angular velocity decreases as the solar activity increases. In a study of seismic data and data of the solar activity over the past sixty years, a relationship is found between an eleven-year seismic activity and the cycles of solar activity. The seismic activity increases during the extremes of the eleven-year solar cycle. Most of the strong earthquakes take place two to three days after the passage of sunspots through the central solar meridian. Whenever there occur earthquakes being thus

Card 1/2

S/203/63/003/001/017/022
A061/A126

Contemporary tectonic movements .....

related to sunspots, no magnetic storms are observed. If magnetic storms produced by sunspots arise, no earthquakes occur. Cosmic rays are said to shed light on electromagnetic conditions in the circumterrestrial space. There are 4 figures and 1 table.

ASSOCIATION: Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut (Arctic and Antarctic Scientific Research Institute)

SUBMITTED: April 10, 1962

Card 2/2

VORONOV, P.S.; GAKKEL', Ya.Ya.; SYTINSKIY, A.D.

Possible effect of the earth's rotation forces on the morphological structure of the Arctic and the Antarctic. Probl. Arkt. i Antarkt. no.10:17-26 '62. (MIRA 16:2)
(Earth—Rotation) (Arctic regions—Geomorphology)
(Antarctic regions—Geomorphology)

SYTINSKIY, A.D.; CHUKANIN, K.I.

Atmospheric circulation in the northern Atlantic and microseisms in Pulkovo. Izv. AN SSSR. Ser. geofiz. no.8:1238-1239 Ag '63. (MIRA 16:9)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Predstavleno chlenom redaktsionnoy kollegii Izvestiy AN SSSR, Seriya geofizicheskaya, Ye.F.Savarenskim.
(Pulkovo—Seismometry) (Atlantic Ocean—Atmosphere)

SYTINSKIY, A.D., mladshiy nauchnyy sotrudnik

Supposed seismicity of the earth and the zone south of 40° S in the period of the International Year of Quiet Sun. Inform.biul.Sov.antark. eksp. no.42:33-35 '63. (MIRA 17:1)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

SYTINSKIY, A.D., mladshiy nauchnyy sotrudnik

[illegible] synchronism in the disturbances of the atmospheric circulation of the Southern and Northern Hemispheres and their cause. Inform. biul. Sov. antark. ekspe. no.44:22-27 '63. (MIRA 17:4)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

SYTINSKIY, A.D.

Recent tectonic movements as one of the manifestations of solar activity. Geomag. i aer. 3 no.1:148-156 Ja-F '63. (MIRA 16:4)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.
(Sun) (Geology, Structural)

SYTINSKIY, A.D.

Possibility of the effect of solar activity on the seismicity of the earth. Biul.Sov. po seism. no.15:47-52 '63. (MIRA 17:4)

SYTINSKIY, A. D.; TRIPOL'NIKOV, V. P.

Some results of studies on the natural vibrations of the ice fields of central Antarctica. Izv. AN SSSR, Ser. geofiz. no. 4: 615-621 Ap '64. (MIRA 17:5)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

SYTINSKIY, A.D.

Atmospheric processes as a mechanism of the effect of solar activity on tectonic phenomena. Dokl. AN SSSR 155 no.1:79-81 Mr '64. (MIRA 17:4)

1. Predstavleno akademikom D.I.Shcherbakovym.

SYTINSKIY, A.D.

Hydrometeorological conditions governing the generation of microseisms. Seism. issl. no.6:37-47 '65. (MIRA 18:9)

LAZAREVA, A.P.; [illegible]

Seismic observations in Mirnyy. Inform.biul.Sov.antarkt.eksp. no.52:3-4 '65. (MIRA 18:10)

1. Institut fiziki Zemli AN SSSR i Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. 2. Zaveduyushchaya seysmicheskoy stantsiyey Pukkovo (for Lazareva).

GUDKOVICH, Z.M.; SYTINSKIY, A.D.

Some results of observations on tidal phenomena in the Arctic basin by means of tiltmeters. Okeanologiia 5 no.5:819-824 '65.
(MIRA 18:11)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

L 40018-66 EWT(1) GW

ACC NR: AP6005990 (N) SOURCE CODE: UR/0213/65/005/005/0819/0824

34
B

AUTHOR: Gudkovich, Z. M.; Sytinskiy, A. D.

ORG: Arctic and Antarctic Scientific Research Institute (rkticheskiy i antarktichesskiy nauchno-issledovatel'skiy institut)

TITLE: Some results of the observations of tide phenomena in the Arctic Basin using tiltmeters

SOURCE: Okeanologiya, v. 5, no. 5, 1965, 819-824

TOPIC TAGS: ocean dynamics, ocean tide, sea ice, angle measurement instrument

ABSTRACT: Changes in the inclination of an ice flow were investigated at North Pole-10 drift station from April to May 1962, using the Bonchkovskiy tiltmeter described by Bonchkovskiy (1940) and Savarenskiy and Kirnos (1955). The measuring device was mounted on bricks frozen into ice. The device's speed of registration was 3 mm/h and its sensitivity was 0.3 sec/mm. The inclination changes of short duration were eliminated using the Ural-2 computer and the Pertsev analytical method (Pertsev, 1959). The monthly series of tiltmeter observations were analyzed using harmonic analysis and short-period oscillations. The data show that the magnitude of the lunar semidiurnal tide in the area of observation is 63 cm and the cotidal hour of the maximum angle of inclination is equal to 1.5 h, which agrees well with the earlier cotidal data given by

UDC: 551.46.08 : 551.466.7(268.5/9)

Card 1/2

L 41084-66 EWT(1)/FCC GW

ACC NR: AP6028354 SOURCE CODE: UR/0203/66/006/004/0726/0732

45
B

AUTHOR: Sytinskiy, A. D.

ORG: Arctic and Antarctic Scientific Research Institute (Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut)

TITLE: Mechanism of influence of solar activity on the atmosphere and lithosphere of the earth

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 4, 1966, 726-732

TOPIC TAGS: ~~solar-terrestrial relation,~~ solar activity, solar corpuscular radiation, seismicity, planetary atmosphere, seismic phenomenon, seismic forecasting, ATMOSPHERIC PRESSURE

ABSTRACT: It is shown that the planetary atmospheric processes are the link connecting earth seismicity with solar activity. Increases in solar corpuscular radiation increase the potential energy of the atmosphere and decrease its kinetic energy. As a result of these changes, normal atmospheric motion, established by the temperature gradients in the troposphere, is disrupted. This, in turn, causes a redistribution of the atmospheric mass around the globe and a consequent disturbance of the figure of the earth. The angular moment of the atmosphere remains unchanged in the process. It is concluded that the mean capacity of internal energy sources is 1—2 orders of magnitude smaller than the mean capacity due to solar activity. Examples of strong earthquakes are explained by peculiarities of atmospheric pressure variation

UDC: 523.745:551.51:551.14

Card 1/2

OSTRETSOVA, I.B.; SYTINSKIY, I.A.

Study of the glutamic decarboxylase activity in the brain of rats following the introduction of strychnine and isonicotinic acid hydrazide. Ukr. biokhim. zhur. 36 no. 4:593-597 '64. (MIRA 18:12)

1. Laboratoriya khimii belka Leningradskogo gosudarstvennogo universiteta. Submitted August 25, 1963.

AVENIROVA, Ye.D.; SAVIN, B.M.; SYTINSKIY, I.A.

Effect of oxygen starvation and acceleration on the content of glutaminic and γ-aminobutyric acid in brain tissues. Vop. med. khim. 10 no.6:595-600 N-D '64. (MIRA 19:1)

1. Laboratoriya khimii belka Leningradskogo universiteta i kafedra aviatsionnoy meditsiny Voyenno-meditsinskoy ordena Lenina akademii imeni Kirova, Leningrad.

LYONG TAN CHYONG; NGUYEN KHYU CHAN'; LYONG TAN TKHAN'; NGUYEN TKHI TKHIN'; SYTINSKIY, I.A.

Hematologic and chemical analysis of the blood in different brain parts of monkeys following γ-irradiation. Radiobiologiia 5 no.2:268-274 '65. (MIRA 18:12)

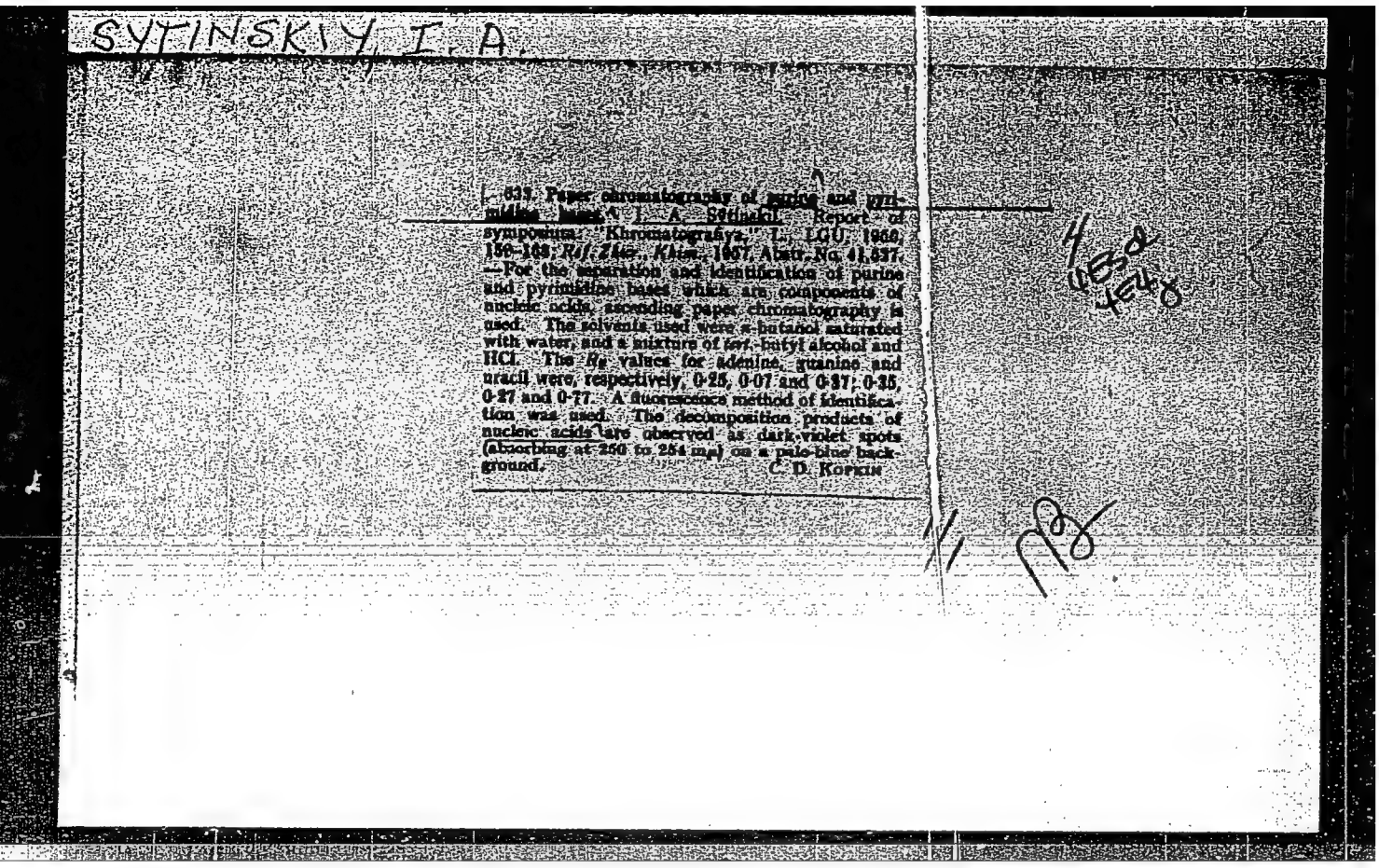
1. Khanoyskiy universitet, Institut radiologii i Bol'nitsa Bak-May Demokraticheskoy Respubliki V'yetnam i Leningradskiy gosudarstvennyy universitet.

SYTINSKIY, I.A.

SYTINSKIY, I.A.--"Changes in the Adenosinetriphosphoric Acid System in the Tissue of the Brain in the Presence of Various Functional States of the Central Nervous System."* (Dissertations In Science And Engineering At USSR Higher Educational Institutions). (34). Acad Med Sci USSR, Inst Experimental Medicine, Leningrad, 1955.

SO: Knizhnaya Letopis', No. 34, 20 August 1955

* For the Degree of Candidate in Biological Sciences



SYTINSKIY, I. A.

633. Paper chromatography of purine and pyrimidine bases. A. I. Aleksandrov. Report of symposium: "Khromatografiya," L., LGU, 1960, 156-163; *Ref. Zhur., Khim.*, 1957, Abstr. No. 41,637. --For the separation and identification of purine and pyrimidine bases which are components of nucleic acids, ascending paper chromatography is used. The solvents used were *n*-butanol saturated with water, and a mixture of *tert*.-butyl alcohol and HCl. The R_f values for adenine, guanine and uracil were, respectively, 0·25, 0·07 and 0·17; 0·35, 0·27 and 0·77. A fluorescence method of identification was used. The decomposition products of nucleic acids are observed as dark-violet spots (absorbing at 250 to 254 mμ) on a pale-blue background.

C. D. Korkin

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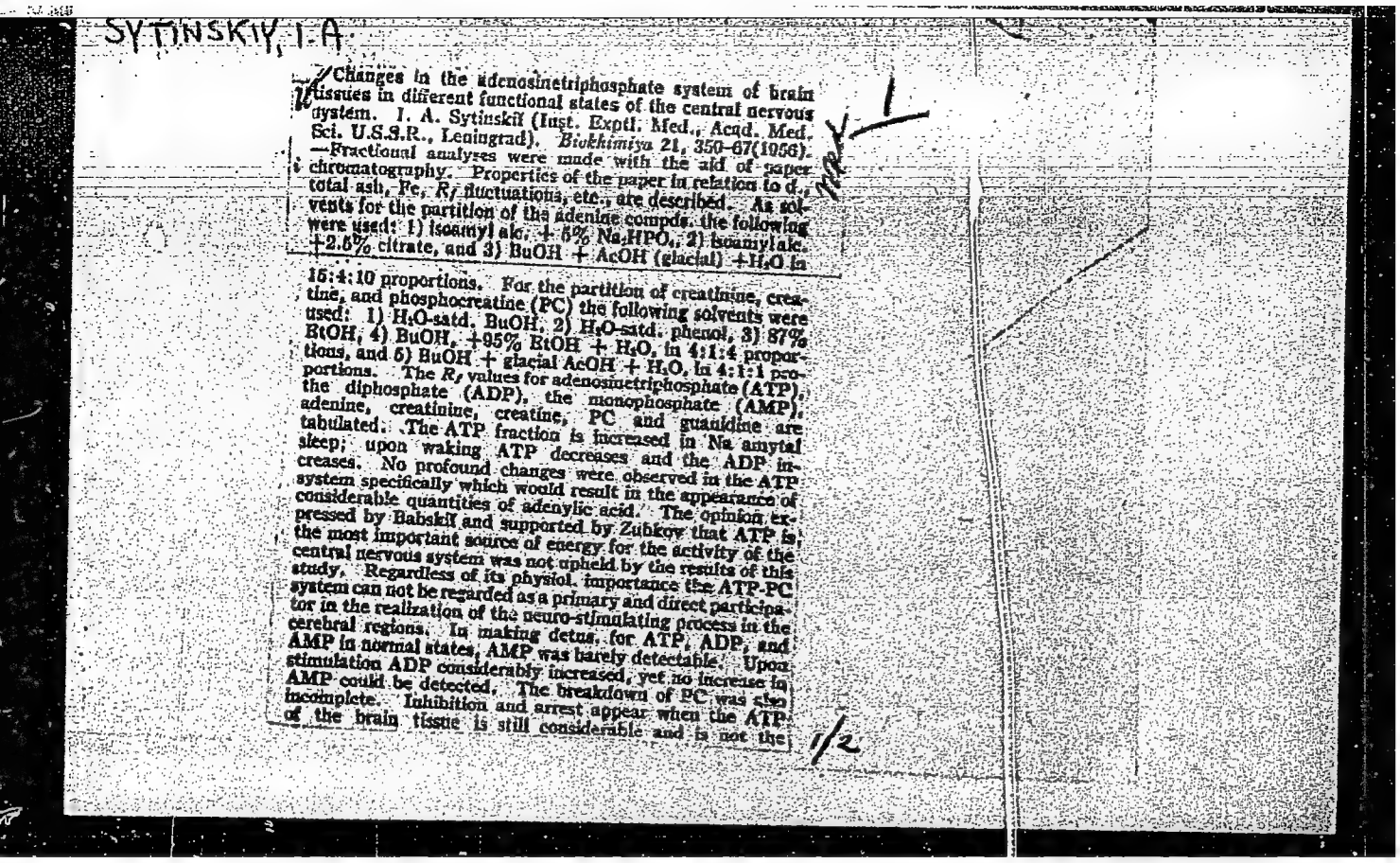
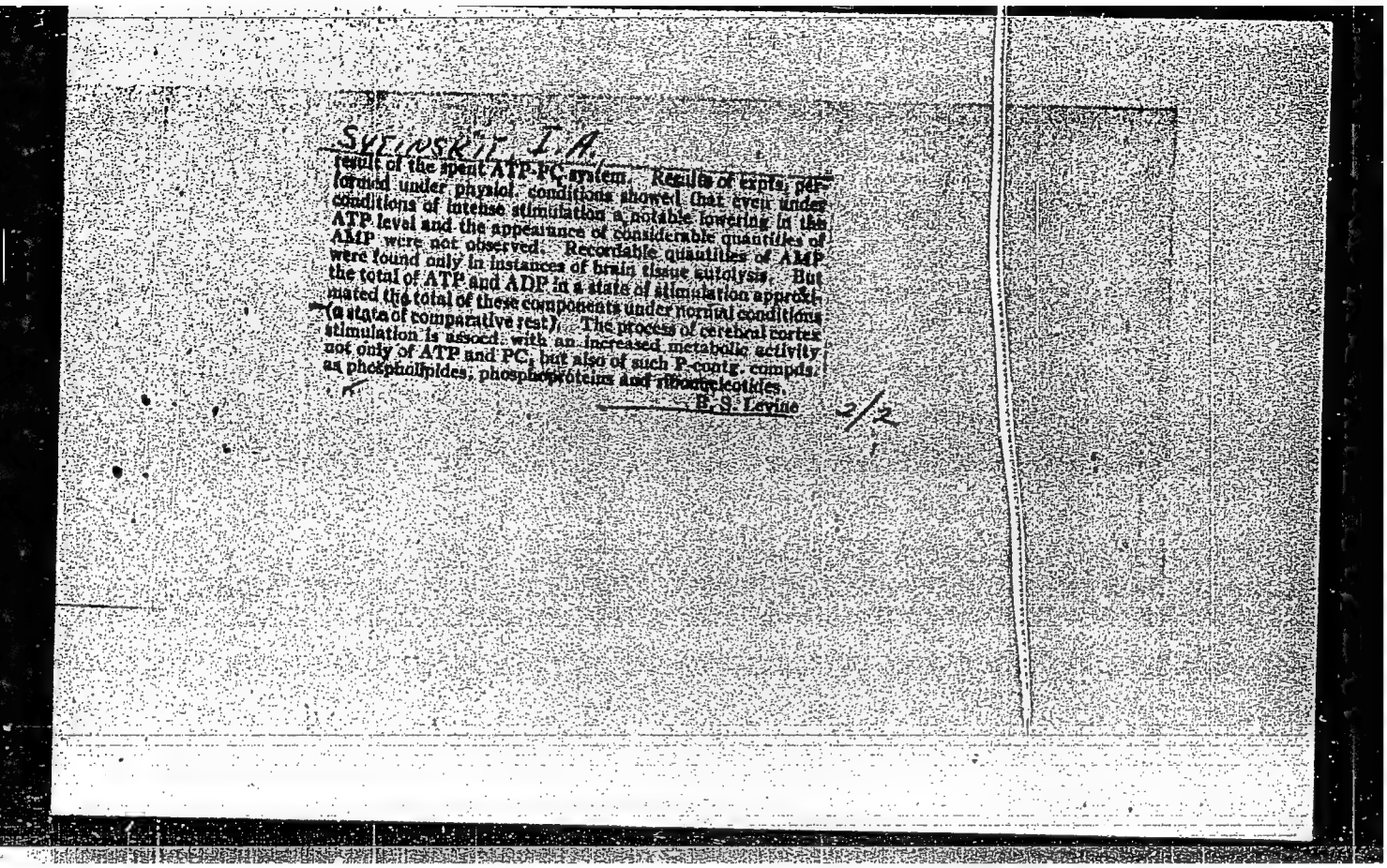


SYTINSKIY, I.A.

Changes in the adenosinetriphosphate system of brain tissues in different functional states of the central nervous system. I. A. Sytinskii (Inst. Exptl. Med., Acad. Med. Sci. U.S.S.R., Leningrad). *Biokhimiya* 21, 350–67(1956).—Fractional analyses were made with the aid of paper chromatography. Properties of the paper in relation to d., total ash, Fe, R_f fluctuations, etc., are described. As solvents for the partition of the adenine compds. the following were used: 1) isoamyl alc. + 6% Na_2HPO_4, 2) isoamyl alc. + 2.6% citrate, and 3) BuOH + AcOH (glacial) + H_2O in 16:4:10 proportions. For the partition of creatinine, creatine, and phosphocreatine (PC) the following solvents were used: 1) H_2O-satd. BuOH, 2) H_2O-satd. phenol, 3) 87% EtOH, 4) BuOH, + 95% EtOH + H_2O, in 4:1:4 proportions, and 5) BuOH + glacial AcOH + H_2O, in 4:1:1 proportions. The R_f values for adenosinetriphosphate (ATP), the diphosphate (ADP), the monophosphate (AMP), adenine, creatinine, creatine, PC and guanidine are tabulated. The ATP fraction is increased in Na amytal sleep; upon waking ATP decreases and the ADP increases. No profound changes were observed in the ATP system specifically which would result in the appearance of considerable quantities of adenylic acid. The opinion expressed by Babskii and supported by Zubkov that ATP is the most important source of energy for the activity of the central nervous system was not upheld by the results of this study. Regardless of its physiol. importance the ATP-PC system can not be regarded as a primary and direct participator in the realization of the neuro-stimulating process in the cerebral regions. In making detns. for ATP, ADP, and AMP in normal states, AMP was barely detectable. Upon stimulation ADP considerably increased, yet no increase in AMP could be detected. The breakdown of PC was then incomplete. Inhibition and arrest appear when the ATP of the brain tissue is still considerable and is not the

1/2



SVETLOVSKIY, I. A.

result of the spent ATP-PC system. Results of expts. performed under physiol. conditions showed that even under conditions of intense stimulation a notable lowering in the ATP level and the appearance of considerable quantities of AMP were not observed. Recordable quantities of AMP were found only in instances of brain tissue autolysis. But the total of ATP and ADP in a state of stimulation approximated the total of these components under normal conditions (a state of comparative rest). The process of cerebral cortex stimulation is assocd. with an increased metabolic activity not only of ATP and PC, but also of such P-contg. compds. as phosphatides, phosphoproteins and ribonucleotides.

B. S. Levine

2/2

LAPINSKAYA, Ye.M., SYTINSKIY, I.A.

Variation of ion transfer numbers in pores of isolated guinea pig skin under different physiological conditions [with summary in English]. Biofizika 3 no.3:371-374 '58 (MIRA 11:6)

1. Gosudarstvennyy yestestvenno-nauchnyy institut im. P.F. Lesgafta, Leningrad.
(SKIN)
(ELECTROPHYSIOLOGY)

VLADIMIROV, G.Ye. [deceased]; MEZESH, V.; MYUL'BERG, A.A.; SYTINSKIY, I.A.

Electrophoretic separation of soluble proteins of the brain on paper and on an agar block. Nerv. sist. no. 2:3-10 '60. (MIRA 14:4)
(PROTEINS IN THE BODY) (PAPER ELECTROPHORESIS)

VERESHCHAGIN, S.M.; SYTINSKIY, I.A.

Physiological effects of γ-aminobutyric acid. Fiziol. zhur. 46 no.10:1287-1292 O '60. (MIRA 13:11)

(BUTYRIC ACID) (INHIBITION)

VERESHCHAGIN, S.M.; SYTINSKIY, I.A.

Effect of gamma-aminobutyric acid and beta-alanine on the motor and bioelectric activity of annelid ganglia. Dokl.AN SSSR 132 no.5:1213-1215 Je '60. (MIRA 13:6)

1. Fiziologicheskiy institut im. A.A. Ukhtomskogo Leningradskogo gosudarstvennogo universiteta im. A.A. Zhdanova. Predstavleno akademikom Ye.N. Pavlovskim.
(BUTYRIC ACID) (ALANINE) (NERVOUS SYSTEM--WORMS)

SYTINSKIY, I. A., VLADIMIROV, G. Y., MYULBERG, A. A., MEZESH, V., (USSR)

"The Electrophoretic Separation of Cerebral Proteins and Lipoproteins."

Report presented at the 5th Int'l. Congress, Moscow, 10-16 Aug 1961.

VLADIMIROV, G.Ye. [deceased]; MYUL'BERG, A.A.; SYTINSKIY, I.A.

Electrophoretic separation of soluble human cerebral proteins on paper and in agar blocks. Vop. med. khim. 7 no. 1:65-70 Ja-F '61. (MIRA 14:4)

1. Laboratory of Protein Chemistry State A.A. Zhdanov University, Leningrad.

(PROTEINS) (BRAIN)

MYUL'BERG, A.A.; SYTINSKIY, I.A.

Extraction from agar blocks of a dye bound to a protein. Vop. med. khim. 7 no.4:441-442 Jl-Ag '61. (MIRA 15:3)

1. Laboratory of Protein Chemistry of the Leningrad State University.

(ELECTROPHORESIS)
(BLOOD PROTEINS)

VERESHCHAGIN, S.M.; SYTINSKIY, I.A.; TYSHCHENKO, V.P.

Influence of γ-aminobutyric acid and β-alanine on motor effects and bioelectric activity in annelids and arthropods. Zhur. ob. biol. 22 no.6:467-471 N-D '61. (MIRA 14:11)

1. Physiological Institute, State University of Leningrad.
(BUTYRIC ACID) (ALANINE) (ELECTROPHYSIOLOGY)

MASLOVA, M.N.; SYTINSKIY, I.A. (Leningrad)

Pharmacological effects of γ-aminobutyric acid. Farm. i toks. 24 no.5:625-630 S-O '61. (MIRA 14:10)

(BUTYRIC ACID)

VLADIMIROV, G.Ye. [deceased]; SYTINSKIY, I.A. (Leningrad)

Metabolism of γ-aminobutyric acid and its role in the functional activity of the nervous system. Usp. sovr. biol. 51 no.1:3-20 Ja-F '61. (MIRA 14:3)

(BUTYRIC ACID) (BRAIN)

VERESHCHAGIN, S.M.; SYTINSKIY, I.A.; TYSHCHENKO, V.P.

Effect of β-hydroxy-γ-aminobutyric acid on the bioelectric activity of ganglia of the isolated nerve chain in lepidopterans. Dokl.AN SSSR 138 no.3:722-724 My '61. (MIRA 14:5)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova. Predstavleno akademikom V.N.Chernigovskim.
(Butyric acid) (Electrophysiology) (Nervous system—Insects)